

Appln No. 10/020,506

Amdt date Jun 10, 2003

Reply to Office action of April 9, 2003

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

56. (Currently amended) A printed wiring board on which an electronic device is mounted, comprising:

at least one carbon containing layer; and

~~at least one electrically conductive layer;~~

wherein at least one electrical connection exists between the carbon containing layer and the electronic device ~~electrically conductive layer.~~

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57. (Previously added) The printed wiring board of claim 56, wherein the carbon containing layer comprises a substrate containing carbon impregnated with a resin.

58. (Previously added) The printed wiring board of claim 57, wherein the substrate comprises woven carbon fibers.

59. (Previously added) The printed wiring board of claim 57, wherein the carbon containing layer comprises unidirectional carbon fibers.

60. (Previously added) The printed wiring board of claim 57, wherein the resin is an electrically conductive resin.

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61. (Previously added) The printed wiring board of claim 60, wherein the electrically conductive resin has a dielectric constant greater than 6.0 at 1 MHz.

62. (Previously added) The printed wiring board of claim 60, wherein the electrically conductive resin contains a pyrolytic carbon additive.

63. (Previously added) The printed wiring board of claim 60, wherein the electrically conductive resin contains a silver oxide additive.

B 64. (Previously added) The printed wiring board of claim 60, wherein the electrically conductive resin contains carbon powder as an additive.

65. (Currently amended) The printed wiring board of claim 57, wherein:

the carbon containing layer is clad on at least one side with ~~the~~ an electrically conductive layer; and ^{? new matter}
an electrical connection between the carbon containing layer and the electrically conductive layer is established by contact between the electrically conductive resin impregnated into the carbon substrate ~~carbon~~ in the carbon containing layer and the electrically conductive layer.

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66. (Previously added) The printed wiring board of claim 56, wherein the carbon containing layer comprises a carbon plate.

67. (Currently amended) The printed wiring board of claim 56, further comprising:

an electrically conductive layer;

wherein the carbon containing layer and the electrically conductive layer are separated by a prepreg.

68. (Previously added) The printed wiring board of claim 67, wherein:

the prepreg contains electrically conductive resin; and

the electrical connection between the carbon containing layer and the electrically conductive layer is created through the electrically conductive resin.

B (69. (Currently amended) The printed wiring board of claim ~~68~~56, wherein the electrical connection between the carbon containing layer and the ~~electrically conductive layer~~electronic device is created by throughincludes a plated vias extending through ~~the electrically conductive layer and the carbon containing layer.~~

70. (New) The printed wiring board of claim 69, further comprising:

a layer of electrically conducting material;

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a layer of dielectric material;

wherein the layer of electrically conductive material is separated from the layer containing carbon by at least the layer of dielectric material;

wherein the layer of electrically conductive material is patterned with circuit traces; and

wherein the ~~electrical connection~~ ^{New Matter} between the carbon containing layer and the ~~electronic device~~ includes a trace on the layer of electrically conductive material that contacts the plated via extending through the carbon containing layer.

71. (New) The printed wiring board of claim 57, wherein:
the carbon containing layer is clad on at least one side with an electrically conductive layer; and

an electrical connection between the carbon containing layer and the electrically conductive layer is established by contact between the carbon substrate in the carbon containing layer and the electrically conductive layer.